3 ~~24~~. (New) The pharmaceutical product of claim ~~23~~ 2, wherein the vector comprises sequence from a DNA or RNA virus.

4 ~~25~~. (New) The pharmaceutical product of claim ~~24~~ 3, wherein the vector is a retroviral vector.

5 ~~26~~. (New) The pharmaceutical product of claim ~~25~~ 4, wherein the retroviral vector comprises sequence from moloney murine leukemia virus or human immunodeficiency (HIV) virus.

.27. (New) The pharmaceutical product of claim 26, wherein vector comprises human immunodeficiency (HIV) *gag* and *pol* genes. SUBE3

7 ~~28~~. (New) The pharmaceutical product of claim ~~27~~ 6, the product further comprising another vector comprising sequence from the human immunodeficiency (HIV) *env* gene.

8 ~~29~~. (New) The pharmaceutical product of claim ~~23~~ 2, wherein the vector comprises sequence from a DNA virus.

9 ~~30~~. (New) The pharmaceutical product of claim ~~29~~ 8, wherein the vector comprises sequence from at least one of pox virus, herpes virus, adenovirus, or adeno-associated virus.

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10 31. (New) The pharmaceutical product of claim 30, wherein the vector is replication defective.

11 32. (New) The pharmaceutical product of claim 30, wherein the pox virus is orthopox or avipox.

12 33. (New) The pharmaceutical product of claim 30, wherein the herpes virus is herpes simplex I virus (HSV).

13 34. (New) The pharmaceutical product of claim 20, wherein the nucleic acid further comprises an operably linked promoter.

14 35. (New) The pharmaceutical product of claim 34, wherein the promoter is a cytomegalovirus (CMV), Rous sarcoma virus (RSV), MMT promoter, or a native promoter.

15 36. (New) The pharmaceutical product of claim 34, wherein the nucleic acid further comprises at least one enhancer.

16 37. (New) The pharmaceutical product of claim 36, wherein the enhancer is a *tat* gene or *tar* element.

17 38. (New) The pharmaceutical product of claim 23, wherein the vector comprises sequence encoding a selectable marker.

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~~39~~. (New) The pharmaceutical product of claim ~~20~~, wherein the encoded endothelial cell mitogen is sufficient to stimulate at least one of native EC cells to proliferate, migrate, remodel or form new sprouts from parental vessels.

40. (New) The pharmaceutical product of claim 39, wherein the encoded endothelial cell mitogen is one of: vascular endothelial growth factor (VEGF), acidic fibroblast growth factor (aFGF), basic fibroblast growth factor (bFGF), fetal growth factor (FGF), epidermal growth factor (EGF), transforming growth factor α and β (TGF-α and TFG-β), platelet-derived endothelial growth factor (PD-ECGF), platelet-derived growth factor (PDGF), tumor necrosis factor α (TNF-α), hepatocyte growth factor (HGF), insulin like growth factor (IGF), erythropoietin, colony stimulating factor (CSF), macrophage-CSF (M-CSF), granulocyte/macrophage CSF (GM-CSF), nitric oxidesynthase (NOS); or a mutein or fragment thereof sufficient to induce or promote EC cell growth.

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~~41~~. (New) The pharmaceutical product of claim ~~39~~, wherein the encoded endothelial cell mitogen comprises a secretory signal sequence.

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~~42~~. (New) The pharmaceutical product of claim ~~20~~, wherein the EC progenitors are angioblasts.

~~43~~. (New) The pharmaceutical product of claim 20, wherein the EC progenitors feature at least one of the following antigenic determinants: flk-1, tie-2, or CD-34.

21 ~~44~~. (New) The pharmaceutical product of claim ~~20~~ 1, wherein the EC progenitors are detectably-labeled.

22 ~~45~~. (New) The pharmaceutical product of claim ~~44~~ 21, wherein the detectably-labeled EC progenitors are radiolabeled.

23 ~~46~~. (New) The pharmaceutical product of claim ~~20~~ 1, wherein the EC progenitors are obtained from human mononuclear cells, heterologous or autologous umbilical cord blood, or peripheral blood.

24 ~~47~~. (New) The pharmaceutical product of claim ~~46~~ 23, wherein the EC progenitors are obtained from the leukocyte fraction of peripheral blood.

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48. (New) The pharmaceutical product of claim 20, wherein the EC progenitors are transfected with or coupled to a cytotoxic agent, cytokine, co-stimulatory molecule to stimulate an immune reaction, anti-tumor drug, or angiogenesis inhibiting agent.

49. (New) The pharmaceutical product of claim 20, wherein the EC progenitors are expanded *in vivo* by administration of recruitment factors.

50. (New) The pharmaceutical product of claim 49, wherein the recruitment factor is GM-CSF and IL-3.

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51. (New) The pharmaceutical product of claim 20, wherein the EC progenitors include heterologous nucleic acid sequence.

52. (New) The pharmaceutical product of claim 51, wherein the heterologous nucleic acid sequence encodes a substance which suppresses cell migration.

53. (New) The pharmaceutical product of claim 52, wherein the substance is an inhibitor of a metalloproteinase, protamine, TIMP-1 and TIMP-2 or protamine.

54. (New) The pharmaceutical product of claim 51, wherein the heterologous nucleic acid sequence encodes: TNF, TGF-α, TGF-β, hemoglobin, interleukin-1, interleukin-2, interleukin-3, interleukin-4, interleukin-5, interleukin-6, interleukin-7, interleukin-8, interleukin-9, interleukin-10, interleukin-11, interleukin-12, GM-CSF, G-CSF, M-CSF, human growth factor, co-stimulatory factor B7, insulin, factor VIII, factor IX, PDGF, EGF, NGF, IL-ira, EPO, β-globin, an interferon, thrombospondin, angiostatin, as well as biologically active muteins of these proteins.

55. (New) The pharmaceutical product of claim 51, wherein the heterologous nucleic acid encodes a toxin or therapeutic peptide fused to an encoded polypeptide.

56. (New) The pharmaceutical product of claim 54, wherein the interferon is IFN-γ.

57. (New) The pharmaceutical product of claim 20, wherein the EC progenitors comprise at least one drug or cytotoxic moiety coupled to the cells.

58. (New) The pharmaceutical product of claim 57, wherein the cytotoxic moiety is an enzymatically active bacterial, fungal, or plant toxin.

59. (New) The pharmaceutical product of claim 58, wherein the toxin is at least one of diphtheria toxin A fragment, non-binding active fragment of diphtheria toxin, exotoxin A, ricin A chain, abrin A chain, modeccin A chain, alphasarcin, *Phytolacca americana* proteins (PAP, PAPII and PAP-S), *Momordica charantia* inhibitor, curcin, crotin, *Saponaria officinalis* inhibitor, gelonin, mitogellin, restrictocin, phenomycin, or enomycin.

60. (New) The pharmaceutical product of claim 58, wherein the toxin is a protein from *Aleurites fordii* or *Dianthin*.

61. (New) The pharmaceutical product of claim 58, wherein the enzymatically active toxic polypeptide is recombinant.

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62. (New) The pharmaceutical product of claim 57, wherein the drug is an anti-angiogenesis compound.

63. (New) The pharmaceutical product of claim 57, wherein the drug is chloroacetyl carbamoyl fumagillol (TNP-470).

64. (New) The pharmaceutical product of claim 20, wherein the EC progenitors are modified *ex vivo* to inhibit angiogenesis.

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